Claims

What is claimed is:

1. A system for automatically configuring I/O devices, comprising:

means for determining physical locations of the I/O devices with respect to one another; and

means for assigning node addresses to each I/O device, each assigned node address corresponding to the physical location of the respective I/O devices.

2. A system for automatically configuring I/O devices, comprising:

a plurality of I/O devices operatively coupled to each other;

a sub-system for determining physical locations of the I/O devices with respect to one another, the sub-system assigning node addresses to each I/O device – each assigned node address corresponding to the physical location of the respective I/O devices.

3. A method for automatically configuring I/O devices, comprising the steps of:

determining physical locations of the I/O devices with respect to one another; and

assigning node addresses to each I/O device, each assigned node address corresponding to the physical location of the respective I/O devices.

4. An adaptable control system for providing network communications, comprising:

a physical media for providing communications to at least one I/O module, wherein the physical media includes a first protocol for enabling the at least one I/O module to receive the network communications, wherein a second protocol provides the network communications to the at least one I/O module.

5. The system of claim 4 wherein the at least one I/O module enables at least one other I/O module to form an I/O group *via* the first protocol.

6. The system of claim 4 wherein the second protocol provides at least one of DeviceNet, EtherNet and ControlNet network communications.

7. The system of claim 4 further comprising an interface for providing a pass-thru for the network communications.

8. The system of claim 7 wherein the interface provides a DC/DC converter for supplying I/O power and enabling the at least one other I/O module.

9. The system of claim 4 further comprising an adapter for establishing network communications.

10. The system of claim 9 wherein the adapter includes at least one processor for enabling the at least one I/O module.

11. The system of claim 9 wherein the adapter includes an Offlink Connection Manager (OCM) object, a node list, and an I/O data table.

12. The system of claim 4 wherein the at least one I/O module includes a processor for receiving the first protocol as an input and providing the first protocol as an output.

13. A method for providing an adaptable control system, comprising the steps of:

receiving network communications *via* an interface;

sequentially enabling at least one I/O module to receive the network communications from the interface; and

enabling at least one other I/O module to form an I/O group.

14. The method of claim 13 further comprising the step of:

using a PointBus input to enable a PointBus output to initiate a network connection.

15. The method of claim 14 further comprising the steps of:

waiting for the PointBus input;

determining a network address for the at least one I/O module; and

enabling the at least one other I/O module to receive a network address after determining the network address for the at least one I/O module.

16. An adaptable control system, comprising:

means for receiving network communications;

means for sequentially enabling at least one I/O module to receive the network communications; and

means for enabling at least one other I/O module to receive a network address after determining the network address for the at least one I/O module.

17. The system of claim 16 further comprising: means for using a PointBus input to enable a PointBus output to initiate a network connection.